• Assignment Level Intermediate

1. What is the role of BIOS in i/o?

BIOS, in full Basic Input/Output System, computer program that is typically stored in EPROM and used by the CPU to perform start-up procedures when the computer is turned on. Its two major procedures are determining what peripheral devices (keyboard, mouse, disk drives, printers, video cards, etc.)

BIOS (basic input/output system) is the program a computer's microprocessor uses to start the computer system after it is powered on. It also manages data flow between the computer's operating system (OS) and attached devices, such as the hard disk, video adapter, keyboard, mouse and printer.

The basic input/output system (BIOS) is the part of an operating system that links the specific hardware devices to the software. It obtains the buffers required to send information from a program to the hardware/desktop receiving the information.

1. What is the role of i/o in CMOS?

input and output devices of the Computer: An input device is a device that transmits data to a computer system for processing, while an output device is a device that receives data from a computer system and subsequently reproduces or displays the results of that processing.

An input/output (I/O) device is a piece of hardware that can take, output, or process data. It receives data as input and provides it to a computer, as well as sends computer data to storage media as a storage output.

An I/O controller connects input and output (I/O) devices to the bus system of a central processing unit (CPU). It typically communicates with the CPU and with the system memory over the system bus and can control many devices.

• Assignment Level Advance

1. Do a practical to reset BIOS ?

* Open the Start menu and select Settings, then Update & Security.
* Select Recovery from the sidebar on the left.
* Click Restart now under the Advanced Setup header.
* When your computer boots up, you'll see a blue troubleshooting screen. Select Troubleshoot > Advanced Options > UEFI Firmware Settings > Restart.

Turn on the computer. Tap the F2 key several times until Entering Setup appears. Reset the BIOS to factory defaults.

1. Do a practical to remove cmos.

Yes , we are complete done a practical to remove cmos .

The BIOS (CMOS) battery stores persistent memory for BIOS and the Date/Time/Location settings for your console. Removing this battery and putting it back in will cause these features to reset to defaults. Unless otherwise altered by an end user, the BIOS settings on your console are also the default settings.

Removing the CMOS battery will reset all the BIOS settings to default. So, if we have a PC that does not boot due to an error in the BIOS setting, we can try removing the CMOS battery to fix the issue . ………………… . . . .

Topic: Laptop & storage

• Assignment Level Basic

* 1. What is laptop?

A laptop is a personal computer that can be easily moved and used in a variety of locations. Most laptops are designed to have all of the functionality of a desktop computer, which means they can generally run the same software and open the same types of files.

Laptops typically have a clamshell form factor with a flat panel screen (usually 11–17 in or 280–430 mm in diagonal size) on the inside of the upper lid and an alphanumeric keyboard and pointing device (such as a trackpad and/or trackpoint) on the inside of the lower lid, although 2-in-1 PCs with a detachable keyboard ...

Laptops are an excellent choice for people who need a portable device that can be used for various tasks. They offer many advantages, including portability, convenience, improved Performance, battery life, and ergonomics.

2. Why laptop is used widely now a days?

Laptops are generally lower in energy consumption than desktop computers. Desktops are designed to be stationary and often reside on a desk. Desktops must be plugged in to a power source to be used. Unlike laptops, the display screen is usually separate from the computer, although this is not always the case.

These computers are light and portable compared to the desktop computers. Notebook computers have a number of advantageous features such as portability, lower power requirements and easy access to ports. It can therefore be used by businessmen and students as it requires less space and electric power.

Laptops are portable powerhouses that let you do research, write assignments, and connect with your teachers, classmates, and friends from almost anywhere. They're also very helpful for students who struggle to take notes by hand and prefer to type.

• Assignment Level Intermediate

1. Describe the working process of laptop?

Laptops combine all of the input and output capabilities and components of a desktop computer, including its display screen, keyboard, speakers, data storage, disc drives, and pointing devices (a touchpad or a trackpad), with a processor and operating system into a smaller device.

The working process of a computer can be divided into three main stages: input, processing, and output.

The working process of a computer can be divided into three main stages: input, processing, and output. Here we have discussed each stage:

* **Input**: The input stage is the first step in the working process of a computer. This is where data and instructions are entered into the computer for processing. Input devices such as keyboards, mice, scanners, and microphones are used to enter data, while software applications are used to provide instructions to the computer. The input data is then converted into a binary code that the computer can understand and process.
* **Processing**: The processing stage is where the computer performs all the necessary computations and manipulations on the input data. This stage involves using the central processing unit (CPU) and other hardware components such as memory and storage. The CPU executes instructions and performs calculations, while memory and storage are used to temporarily or permanently store data and programs.
* **Output**: The output stage is the final step in the working process of a computer. This is where the processed data is presented to the user in a human-readable form. [Output devices](https://artoftesting.com/computer-output-devices-example) such as monitors, printers, and speakers are used to display, print, or play back the results of the processing stage.

1. What is storage ?

Storage is a mechanism that enables a computer to retain data, either temporarily or permanently. Storage devices such as flash drives and hard disks are a fundamental component of most digital devices since they allow users to preserve all kinds of information such as videos, documents, pictures and raw data .

the act of storing : the state of being stored. especially : the safekeeping of goods in a depository (such as a warehouse)

b. : the price charged for keeping goods in a storehouse.

Whereas memory refers to the location of short-term data, storage is the component of your computer that allows you to store and access data on a long-term basis. Usually, storage comes in the form of a solid-state drive or a hard drive.

1. List out the types of storage.

There are two types of storage devices used with computers :

 A primary storage device, such as RAM,

A secondary storage device, such as a hard drive. Secondary storage can be removable, internal, or external .

AND ALSO

**Types of Data Storage**

* Hard Drives.
* Solid-State Drives (SSD)
* CD/DVD Drives.
* Flash Drives.

• Assignment Level Advance

1 - Do a practical to identify types of storage.

Yes , we are complete done a practical to identify types of storage .

A **storage** device is an integral part of the computer hardware which stores information/data to process the result of any computational work.

There are two types of storage devices used with computers :

 A primary storage device, such as RAM,

A secondary storage device, such as a hard drive. Secondary storage can be removable, internal, or external .

AND ALSO

**Types of Data Storage**

* Hard Drives.
* Solid-State Drives (SSD)
* CD/DVD Drives.
* Flash Drives.

2- Do a practical to disassemble and assemble the storage .

Disassemble is formed from dis-, meaning "reversal," and assemble, "to put together."

 Disassemble, then, is to take something apart, literally or figuratively: Entering the moon's orbit, the rocket was further disassembled enabling two Apollo Astronauts to explore the lunar surface.

**Computer disassembly**

1. 1 – Unplug your computer and peripheral items. ...
2. 2 – Remove side covers. ...
3. 3 – Disconnect connectors. ...
4. 4 – Remove standalone fans. ...
5. 5 – Remove the storage drive. ...
6. 6 – Remove memory (RAM) modules. ...
7. 7 – Remove power supply unit. ...
8. 8 – Remove motherboard adapter or expansion cards.

**Computer Assembly Steps**

1. Step 1: Open Case. Remove the back screws. ...
2. Step 2: Mount Motherboard. Screw motherboard standoffs into the case. ...
3. Step 3: Mount Processor (CPU) ...
4. Step 4: Install CPU Cooler. ...
5. Step 5: Install Power Supply (PSU) ...
6. Step 6: Mount Memory (RAM) ...
7. Step 7: Install Graphics Card. ...
8. Step 8: Mount Storage Drives.

3. Do a practical to install the storage devices

In desktops, there is always a spot reserved for it since it has a huge size. Then one should put the CD ROM there and screw it with the backside of the CPU. Then the bus should be connected and computer should be restarted. Upon turning on, the computer would show the drives and would install them automatically.

Storage devices like hard disks are needed to install operating systems, programs and additional storage devices, and to save documents. Without devices like HDDs that can retain data after they have been turned off, computer users would not be able to store programs or save files or documents to their computers.

Topic: Printer

• Assignment Level Basic

1. What is printer?

A printer is a device that accepts text and graphic output from a computer and transfers the information to paper, usually to standard-size, 8.5" by 11" sheets of paper. Printers vary in size, speed, sophistication and cost.

printer, also called computer printer, electronic device that accepts text files or images from a computer and transfers them to a medium such as paper or film. It can be connected directly to the computer or indirectly via a network

A line printer is an impact printer which makes use of a continuous feed of paper and prints one line of text at a time. Although they have been replaced in most instances by high-speed laser printers, they are still used in some business as they are low cost and have the ability to print on multi-part forms.

Computer devices such as mice, printers, scanners and speakers are known as peripheral hardware. These peripherals are further split into two categories, input devices and output devices. The function of the peripheral determines to which category it belongs.

Printers are one of the common computer peripheral devices that can be classified into two categories that are 2D and 3D printers. The 2D printers are used to print text and graphics on a paper, and 3D printers are used to create three dimensional physical objects .

2. Why is printer needed?

People find using paper to be more convenient when they need to print off a report, grab a pen and makes notes and changes to pieces of work. Yes, this can be achieved digitally with programs such as Microsoft Office and Adobe Reader but being able to correct and change work using a pen and paper is so much easier.

In general, the printer is a hardware device that is used to get a hard copy of a document or a file. It can be used for: getting the printout of important documents. to prepare projects in schools or colleges .

We would not have books, magazines or newspapers. Posters, flyers, pamphlets and mailers would not exist. The printing press allows us to share large amounts of information quickly and in huge numbers .

• Assignment Level Intermediate

1. Describe the working process of printer.

At the basic level, printers work by converting digital images and text into physical copies. They do this using a driver or specialized software that has been designed to convert the file into a language that the printer can understand. The image or text is then recreated on the page using a series of minuscule dots.

Printers are one of the common computer peripheral devices that can be classified into two categories that are 2D and 3D printers. The 2D printers are used to print text and graphics on a paper, and 3D printers are used to create three dimensional physical objects.

The printers laser beams your print onto a metal drum. The drum uses static electricity to attract powdered toner to the drums cylinder. The drum rolls the toner onto the paper in the form of your print. The toner is melted & pressed onto the paper by heat from a fuser as it passes through its rollers.

A laser traces your document or image onto an electromagnetic canvas, upon which electrically charged particles of toner attach. Toner is a printing material that's unique to laser printers.

It's advantageous because a single toner cartridge can yield far more pages than an ink cartridge can.

The main function of the printers is to present text or images to flat media such as paper in various sizes. After all, everyone needs a printer for different needs. For example, high school and college students usually need to print black and white documents.

2. What are the types of printer.

The most common types of printers you find on the market are inkjet printers and laser printers. Inkjet printers are commonly sold for home use, while laser printers are more frequently sold to businesses, but both can be used in either environment.

From compact and simple to complex and sophisticated, there are many types of printers on the market. However, there are six types of printers that are tried and tested: inkjet printers, laser printers, solid ink printers, continuous ink printers, LED printers, dot matrix printers and A3 printers.

**Types of Printers**

* Laser Printers.
* Solid Ink Printers.
* LED Printers.
* Business Inkjet Printers.
* Home Inkjet Printers.
* Multifunction Printers.
* Dot Matrix Printers.
* 3D Printers.

• Assignment Level Advance

* 1. - Do a practical to install the printer

Yes , we are complete a practical to install the printer .

**How to set up a new printer**

1. Plug in the printer's power cable and make sure it's turned on.
2. Connect the included cable (usually a USB cable) from the printer to the computer. ...
3. On your computer, locate the Printer settings. ...
4. Look for the option to Add a printer, then follow the instructions that appear.

Simply plug the USB cable from your printer into an available USB port on your PC, and turn the printer on. On the taskbar, select the Search icon, type Printers in the search bar, and then select Printers & scanners from the search results to open the Printers & scanners system setting.

4-Do a practical to Troubleshoot the improper printing.

Yes , we are complete a practical to trouble shoot the improper printing .

Unplug the printer, turn off the computer, and restart both the devices. Once the devices have restarted, run a self-test page. If it still doesn't print properly, the problem could be with the printer, toner, drum unit, or roller. The error message should explain what the problem is.

Open the Windows Control Panel and navigate to Hardware and Sound | Devices and Printers. This screen will show you all of the printers that are installed. Right-click on the printer that is experiencing problems, and then select the Troubleshoot command from the shortcut menu.

**Before you begin**

1. Unplug and restart your printer. Sometimes power cycling your printer can resolve the issue. ...
2. Check cables or wireless connection. ...
3. Uninstall and reinstall your printer. ...
4. Install the latest driver for your printer. ...
5. Clear and reset the print spooler. ...
6. Change a printer's status to "online"

Check that the connection is working - i.e. USB cable, Wi-Fi, Bluetooth, etc. Try printing from another device. This helps to identify if the problem is the printer or the client. If you've tried all the above and it's still not working, uninstall and reinstall the printer software and drivers

Topic: Storage devices

• Assignment Level Basic

1- What is storage device ?

1- storage, retention, keeping, holding. usage: the act of storing something.

2 - storehouse, depot, entrepot, storage, store, depository, deposit, depositary, repository.

Storage in computer systems. A storage device is a piece of hardware that is primarily used for storing data. Every desktop computer, laptop, tablet, and smartphone will have some kind of storage device within it. There are also standalone, external storage drives that can you can use across devices.

Storage is a process through which digital data is saved within a data storage device by means of computing technology. Storage is a mechanism that enables a computer to retain data, either temporarily or permanently .

Computer Storage Device Definition: A hardware device which can be used to store digital data and applications which may be in the form of images, video, audio, etc. is called a storage device. It is a key component of a computer and the hard drive is one of its examples.

A storage device is a kind of hardware, which is also known as storage, storage medium, digital storage, or storage media that has the ability to store information either temporarily or permanently. Generally, it is used to hold, port, and extract data files.

Storage is used in offices, data centers, edge environments, remote locations and people's homes. Storage is also an important component in mobile devices such as smartphones and tablets. Consumers and businesses rely on storage to preserve information ranging from personal photos to business-critical data.

* 1. Why we need storage device ?

A storage device is a hardware component that allows you to store and retrieve digital information on your computer. It provides a means to store data, such as documents, photos, videos, and software, for later use.

The devices that are used to store data are called Storage Devices. We store our data for future reference. There are many storage devices to store our data or work so that we can get it back whenever we need it.

A storage device for a computer enables its user to store and safely access the data and applications on a computer device. Knowing and learning about these computer storage devices is necessary as it works as one of the core components of the system.

Without a storage device, a computer would not be able to run or even boot up. Or in other words, we can say that a storage device is hardware that is used for storing, porting, or extracting data files.

• Assignment Level Intermediate

* 1. List out the types of storage devices.
* RAM. RAM means random access memory which is used to access any temporary data and to get intermediate results for the usage of that information. ...
* ROM. ROM means read-only memory. ...
* Floppy disk. ...
* Hard disk. ...
* Magnetic disk. ...
* Pen drive. ...
* SSD. ...
* Sd card.

2. Describe the working process of storage devices

These devices use a mechanical device known as a drive that connects to the computing device. The disk (cartridge or media) coated with iron oxide stores the information and is inserted into the drive. The drive rotates the disk at high speed via motor.

It is used to store information that is used immediately or we can say that it is a temporary memory. Computers bring the software installed on a hard disk to RAM to process it and to be used by the user. Once, the computer is turned off, the data is deleted.

The hard disk drive (HDD) is the original hard drive. These are magnetic storage devices that have been around since the 1950s, though they've evolved over time. A hard disk drive is comprised of a stack of spinning metal disks known as platters.

The importance of storage devices is that they can retain almost all the data and applications in a device. Depending on its demand or performance, it comes in various sizes and shapes. It can retain information for the short term and the long term. A storage device needs to reserve or store your important data.

• Assignment Level Advance

* 1. Do a practical to Remove storage devices and reinstall it and make a gpt disk .

Yes , we are complete done a practical to remove storage devices and reinstall it and make a gpt disk .